

Problem	1	2	Total
Points:	20	32	52
Score:			

**This homework assignment has 2 problems, for a total of 52 points.**

1. (20 points) Of the following statements, identify all that hold about XSLT
  - A. XSLT applies templates recursively by default, but only going downward in the XML document tree
  - B. In XSLT, templates can be applied to parent, children, or other descendants of a node, but not to its grandparent
  - C. XSLT allows only a proper subset of the XPath language to be used
  - D. In XSLT, the copy-of element expresses a command that provides a deep copy of an element on which it is applied
  - E. In XSLT, by default the attributes are ignored during recursive calls to apply templates
  - F. In XSLT, templates can be applied on attributes if you specify them appropriately
  - G. The empty XSLT transformation yields a (practically identical ignoring variations allowed by the XML Infoset) copy of a document on which it is applied
  - H. It is possible to construct a nonempty XML document that yields a copy (practically identical ignoring variations allowed by the XML Infoset) when transformed by the empty XSLT transformation
  - I. In XSLT, as in XPath, an attribute is not a child of its parent
  - J. In XSLT, as in XPath, a text node is not a child of its parent
2. (32 points) Of the following statements, identify all that hold about XML keys, integrity constraints, and other aspects of relating XML to databases:
  - A. Referential integrity as captured by keyref means that an element that is referred to must exist
  - B. When XML structures are mapped to relational schemas, XML key constraints are lost
  - C. General XQuery expressions can be used to specify integrity constraints on XML documents
  - D. A key allows more than one selector subelement in order to construct a composite key
  - E. Contrary to its name, the data-centric view has little to do with relational database management
  - F. The document-centric view gains prominence in business settings where audit trails are required
  - G. Native XML databases support the storage of XML documents primarily by shredding
  - H. XML has yet to become popular for messaging because messaging middleware does not support complex structures
  - I. It is possible to write a key selector referring to a grandchild element of the given element
  - J. If the document schema states that a specific grandchild element of the given element may contain only text, it is possible to write a field expression referring to the text occurring within that grandchild element
  - K. It is possible to write a field expression referring to the first grandchild element of the given element
  - L. ../child is allowed in a selector provided child is a particular element that exists in the appropriate context
  - M. Any mapping of XML to relational schemas requires selecting one or more tuple-generating elements
  - N. In mapping XML to tables, sometimes you would create a table with exactly one column
  - O. In mapping XML to tables, sometimes you would be forced to introduce additional columns
  - P. The general representation of an XML document in a relational schema can lead to multiple self-joins even for simple queries on the XML document